



An e-distinctivity parameter to evaluate an e-business idea

E-distinctivity
parameter

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Abstract

Purpose – The purpose of this paper is to present a new metric that aims to quantitatively support the selection phase of a new e-business idea by performing an evaluation of its distinctness. The paper seeks to explain the reasons for the creation of a new parameter, called “E-distinctivity”, the identification of the metrics to assess it and aims to present the results of its evaluation.

Design/methodology/approach – In order to visualize the new parameter and to execute all the needed evaluations a two-dimensional radar chart has been created “*ad hoc*”. The radar chart is built on eight crucial characteristics divided into four principal zones representing the strategic aspects of the E-distinctivity. In order to assess the soundness of the identified parameter its evaluation on a reference group of well-known e-business ventures has been performed.

Findings – The E-distinctivity parameter permits easy comparison among many different alternative ideas during a feasibility phase and provides quantitative data to evaluate these ideas without requiring huge investments.

Research limitations/implications – This parameter is not intended to be sufficient for an exhaustive feasibility assessment of an e-business idea. Additional investigation is necessary to determine other parameters and evaluation tasks to improve the accuracy of the model. The aim is to support the selection phase of a new e-business idea with the aid of new parameters that integrate traditional methods of business analysis.

Originality/value – The study identified an original parameter to be evaluated on a given e-business idea in order to provide a quantitative measure of its distinctness.

Keywords Competencies, Electronic commerce, Parametric measures, Business formation, Decision making

Paper type Research paper

Introduction

This paper presents a new metric that aims to quantitatively support the selection phase of a new e-business idea and to evaluate its e-business distinctness. In this paper, we introduce a new parameter, “e-distinctivity”, that aims to evaluate how much a new e-business idea is difficult to imitate, difficult to substitute, difficult to transfer and how much is innovative and different with respect to existing competitors. This approach aims to extend to the e-business the concept of “distinctive competencies” as key factors to gain a competitive advantage that have been widely discussed in the strategic management literature (Teece, 1998).

The e-distinctivity parameter extends the model proposed in a previous paper for the evaluation of e-business ideas where we identified two parameters called “Conceptual Accessibility” and “Technological Accessibility” (Capece, 2006). The first parameter, “Conceptual Accessibility”, aims to evaluate how close a new e-business idea is to known and common e-business concepts and ideas. The goal is to provide a measure of how much the new idea will be promptly understood and accepted given the existing cultural background of the expected users. The second parameter, “Technological Accessibility”, aims to evaluate how much the new e-business idea implementation will require for the use of well known and widespread technological instruments.



In the e-business environment, the feasibility assessment of a new idea not only requires traditional tools of business analysis, but also evaluation of the specific media aspects that will be used to bring the idea to final users. An e-business idea is a business idea, which derives its distinctiveness and competitiveness from two key factors:

- (1) it is proposed for targeting users through the internet; and
- (2) its realization would not be possible without internet support.

It is necessary to clearly identify the motivations behind the idea, the user target of the idea and the aspects of innovation and differentiation that should drive the idea towards success with respect to the existing business scenario.

A widely accepted approach in evaluating a new idea is based on a detailed analysis of the existing environment i.e. it depends on the capability to identify and anticipate the needs of defined users targets and thus on the capability to offer solutions that will satisfy these needs. In the e-business specific scenario then we need to adapt those categories to take into account the used media (i.e. the internet).

Following the classic marketing literature, to be successful a business idea must be innovative, attractive, competitive, pursuable and capable to generate revenue (Kotler and Scott, 1991). The most recognized methods for new ventures evaluation are feasibility and cost/benefit analysis. In the literature, the typical phases of venture development include ideation, selection, preparation, evaluation and actuation phases (Kotler and Scott, 1991). In this paper, we will concentrate on the feasibility analysis during the selection phase for e-business ideas.

Feasibility analysis aims to define the viability an e-business idea and to provide decision makers with the information necessary to confirm the start of project realization and required investments. The feasibility study for e-business is an important instrument to ensure an effective use information computer technology (ICT) tools and in the economic effectiveness of the ventures. It also increases the awareness of the investment decision and therefore helps evaluate expected benefits and costs. Thus, it helps decrease projects risk and serves as an instrument to manage project complexity.

The reference user panel

In order to tune the parameter and to execute all the needed evaluations a user panel based method is used. The panel is selected to represent the expected target of the new e-business idea. Thus, the survey instrument should include questions on demographic information. All the panel components must frequently access the internet both for work and for leisure.

The reference enterprise group

To select a representative set of successful e-business ventures (the reference enterprise group) a user panel has been built using a database in which there was a list of 180 people names and phone numbers. This list has been used in order to perform the interviews. Contact was made with 150 customers; 30 were unreachable. Of the 150 customers contacted, 100 agreed to participate in the study. The survey instrument included questions on demographic information. All the panelists within the database are European people that frequently access the Internet both for work and for leisure. In particular, the panel consists of 100 people aged between 20 and 50. A total of 70 per cent of the panel components have a bachelor degree or are university students.

A total of 40 per cent use ICT and the internet specifically for work purposes and all of them use it for study and other personal interests. All the panelists were asked to indicate ten e-business enterprises, provided by a database containing 25, on which they were questioned. The majority of the panelists chose the same ten e-business enterprises. The enterprise reference group includes Amazon, AOL, eBay, Expedia, Google, iTunes, Million Dollar HomePage, Skype, SuperEva and Yahoo!

E-distinctivity parameter

The necessity to create this new parameter arose when we asked ourselves two crucial questions about capabilities to obtain and maintain distinctivity in the internet era:

- (1) How can an e-business idea be inimitable, non-substitutable, non-transferable and innovative and different from the existing ones?
- (2) How can these items be measured?

We tried to find an answer to these questions by defining a metrics and a parameter in order to measure the fundamental aspects that describe the distinctness of an e-business idea. After that we decided to apply the identified metric to a panel of successful business ideas to assess its soundness and accuracy. The e-distinctivity parameter aims to evaluate how much the new e-business idea is difficult to imitate, difficult to substitute, difficult to transfer and innovative/different from existing competitors.

As a first step four aspects have been identified to provide a quantitative baseline evaluation to the e-distinctivity: inimitability, non-substitutability, non-transferability and innovation and differentiation with respect to the existing competitors. For each of these four aspects two characteristics are identified in order to better specify and evaluate the parameter and its significance. They have to be defined carefully to determine the importance and significance of the e-distinctivity attribute. All these eight characteristics interact and contribute to the final value of the parameter.

For the first one, inimitability, the two characteristics we wished to evaluate are:

- (1) how much the idea is protected by license, patents or intellectual property; and
- (2) the extent of idea information that is exposed.

For the second one, non-transferability, the two characteristics we wished to evaluate are:

- (1) the extent by which the idea is influenced by local, regional or other environmental forces; and
- (2) whether the idea is tacit and non codified when investigated by an external analysis.

For the third one, non-substitutability, two characteristics we wished to evaluate are:

- (1) how much the use of the idea fosters customers' loyalty; and
- (2) how much the idea is customized or customizable by the final users.

For the fourth one, innovation and differentiation with respect to the existing competitors, the two characteristics we wished to evaluate are:

- (1) how many complementary and successful ideas exist; and
- (2) how much the approach is different from the existing ones.

Once the idea has been explained to the panelists, the four aspects are evaluated by measuring each of the eight characteristics. The measure of each characteristic is realized by answering to a specific statement with a value between 1 (low) and 5 (high). The results for each e-business idea can then be visualized in a two-dimensional radar consisting of four principal zones each representing one of the e-distinctivity aspects.

The radar graph allows representation of results in a form that will be simpler to understand. Once the idea has been explained to the reference panel (panelists), the eight characteristics have to be evaluated one by one by the reference panel. To implement a synthetic representation of the results on the radar chart all the results from the same characteristic have been averaged. At the end of the evaluation, we have a single value for each characteristic for every e-business idea considered for our study. Every quadrant represents a selected aspect of the e-distinctivity parameter. In each quadrant, there are two axes that indicate the characteristics to evaluate for the aspect (see Figure 1).

For the first distinctness aspect, “inimitability”, and the first characteristic, “how much the idea is protected by license, patents or intellectual property”, we have to identify the amount of licenses, patents or intellectual property that provide protection against the imitation of an idea. To evaluate this characteristic, we decided to anchor the different values to the following descriptions:

- (1) 5: the idea is completely protected by license, patents or intellectual property;
- (2) 4: the idea has all the key aspects protected by intellectual property;
- (3) 3: the idea has some key aspects protected by intellectual property;
- (4) 2: the idea has some non-key aspects protected by intellectual property; and
- (5) 1: the idea is completely unprotected.

For the second characteristic of “inimitability”, “the extent of idea information that is exposed”, we have to explain the concept of observability. The observability of the technology or the organization is an important factor for imitation and plays a crucial role.

To evaluate this characteristic, we decided to assign these different value meanings:

- (1) 5: in order to implement the idea it is not necessary to expose any part of the idea itself to the final user;

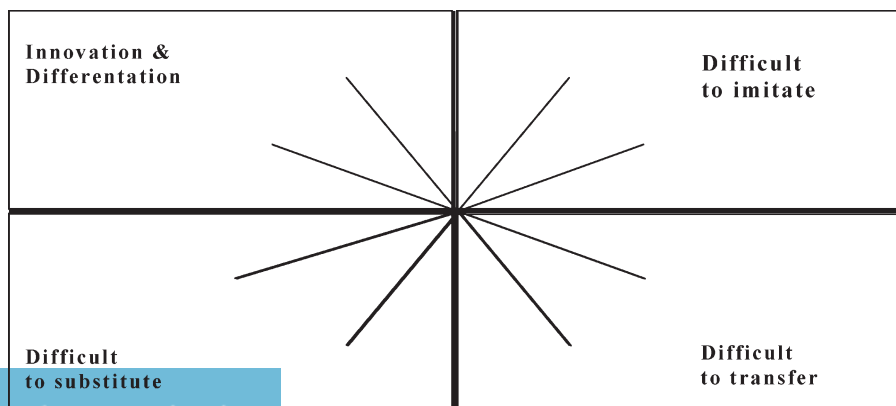


Figure 1.
Results of the questionnaire regarding the ten e-business ideas selected

- (2) 4: in order to implement the idea it is necessary to expose only the non-key aspects of the idea itself to the final user;
- (3) 3: in order to implement the idea it is necessary to expose some key aspects of the idea itself to the final user;
- (4) 2: in order to implement the idea it is necessary to expose some key and non-key aspects of the idea itself to the final user; and
- (5) 1: in order to make use of the idea it is necessary to completely expose the idea itself to the final user.

For the second aspect, “non-transferability”, regarding the first characteristic, “how much the idea is influenced by the local, regional or environmental forces”, we have to underline how some ideas can be influenced by these forces. Firm’s capabilities are deeply shaped by these factors. Porter (1990) in fact attests that differences in local product market, local factor market and institutions play an important and strategic role in shaping competitive capabilities. This means that replication and imitation in a different geographical context may then be difficult and costly in terms of time and money.

To evaluate this characteristic, we decided to assign these different value meanings:

- (1) 5: the idea can be implemented only by leveraging on local, regional or environmental forces;
- (2) 4: some key aspects of the idea are implemented by leveraging on local, regional or environmental forces;
- (3) 3: some non-key aspects of the idea are implemented by leveraging on local, regional or environmental forces;
- (4) 2: the idea is negligibly influenced by the local, regional or environmental forces; and
- (5) 1: the idea is not influenced at all by the local, regional or environmental forces.

For the second characteristic of “non-transferability”, “whether the idea is tacit and non-codified when investigated by an external analysis”, we have to explain the concepts of tacit and codified knowledge. Tacit knowledge (Teece, 1981) is difficult to articulate in a way that is meaningful for others. This definition means that the more a given item of knowledge has been codified, the more it can be transferred. This point is an important and crucial property that depends on the ready availability of channels of communication suitable for the transmission of well-codified information. Uncodified or tacit knowledge is slow and costly to transmit or reproduce. Ambiguities and error of interpretation can occur in the process. The first ones can be overcome only when communications take place in a manner that is the most similar to a face-to-face dialogue. The second ones can be corrected only when there is a meaningful and appropriate system of feedback. This means that messages and therefore knowledge can better be transferred if they are structured in a codified form.

To evaluate this characteristic, we decided to assign the meanings to the different values as follows:

- (1) 5: the greatest part of the information and knowledge of the idea are tacit;
- (2) 4: most of the key aspects of the information and knowledge of the idea are tacit;
- (3) 3: some key aspects of the information and knowledge of the idea are tacit;

- (4) 2: the non-key aspects of the information and knowledge of the idea are tacit; and
- (5) 1: the greatest part of the information and knowledge of the idea is not tacit.

For “non-substitutability” and its first characteristic, “how much the use of the idea fosters customers’ loyalty”, we have to investigate the reasons that allow a firm aim to gain customers’ loyalty.

Factors that determine that consumers make most of their transactions in the same place are very important in order to avoid substitutability. Retaining customers is a financial imperative for any e-commerce or e-business enterprise, especially as attracting new customers is considerably more expensive than for comparable, traditional, brick-and-mortar stores. Understanding how to determine a sense of loyalty in the final user remains one of the crucial management issues. The development, maintenance, and enhancement of customer loyalty represent a fundamental marketing strategy for attaining competitive advantage (Gould, 1995; Kotler, 1988; Reichheld, 1993). It is important that the partners of an economic relationship are prepared to work at preserving it because it must continue indefinitely (Morgan and Hunt, 1994).

To evaluate this characteristic, we decided to assign the meanings to the different values as follows:

- (1) 5: customers’ loyalty is always fostered by the use of the idea;
- (2) 4: customers’ loyalty is fostered in most of the cases by the use of the idea;
- (3) 3: customers’ loyalty is fostered only under certain conditions or due to particular sales promotions;
- (4) 2: customers’ loyalty is fostered only during the first period of the utilization by the final user; and
- (5) 1: customers’ loyalty is not fostered at all by the use of the idea.

For “non-substitutability’s” second characteristic, “how much the idea is customized or customizable by the final users”, the concept of “customization” needs some clarification. The term mass customization was coined by Davis (1987) who predicted that the more a company was able to deliver customized goods on a mass basis, relative to their competition, the greater would be their competitive advantage (see also Pitt *et al.* (1999), and Duray and Milligan (1999)). Pine *et al.* (1993) describe the synergy of mass customization and continuous improvement as a “new” competitive strategy to challenge “old” strategies such as mass production. Hart and Taylor (1996) offer an operational definition: “Mass customization is the use of flexible processes and organizational structures to produce varied and often individually customized products and services at the price of standardized, mass produced alternatives”. The concepts of flexibility, timeliness and variety are essential to the notion of mass customization. It is determining what the customer really needs and attempting to respond quickly with an offering, which costs to the customer relatively little more than standardized mass produced alternatives’ (Duray and Milligan, 1999). Mass customization is a firm’s ability to meet specific customer requirements in mass, yet at a low cost, which rivals mass production capabilities.

To evaluate this characteristic we decided to assign the meanings to the different values as follows:

- (1) 5: the idea can be deeply customized by the final user;
- (2) 4: the idea can be customized in many key aspects without restrictions by the final user;
- (3) 3: the idea can be customized in a restricted and fixed number of key aspects;
- (4) 2: the idea can be customized only in a restricted and fixed number of non-key aspects; and
- (5) 1: the idea is not customized not even customizable by the final user.

For the fourth aspect, “innovation and differentiation with respect to the existing competitors”, and its first characteristic, “how many complementary and successful ideas exist”, we have to determine if an idea could have the possibility to gain a competitive advantage. To do so, it has to be compared with the other ideas in the same field. The greater the number of competitors, the more difficulty for entering a specified market. It is not simple to gain a slice of the market if many similar and successful ideas exist.

To evaluate this characteristic, we decided to assign the meanings to the different values as follows:

- (1) 5: No similar idea exists;
- (2) 4: a number between one and two of successful similar ideas exist;
- (3) 3: a number between three and six of successful similar ideas exist;
- (4) 2: a number between six and eight of successful similar ideas exist; and
- (5) 1: many similar and successful ideas exist.

For the fourth aspect, “innovation and differentiation with respect to the existing competitors”, and its second characteristic, “how much the approach is different from the existing ones”, we have to observe the approach of the idea and to compare it with the other approaches that characterize the other existing ideas. To gain competitive advantage the new idea has to be different form the others. If in the market there are many successful and similar ideas, the only way to survive is to present something different in order to capture the attention and the interest of the customers.

To evaluate this characteristic, we decided to assign the meanings to the different values as follows:

- (1) 5: the idea is substantially different from the other existing ones;
- (2) 4: the idea is different in many key aspects;
- (3) 3: the idea is different in a restricted number of key aspects;
- (4) 2: the idea differs only in a restricted number of non-key aspects; and
- (5) 1: the idea does not considerably differ from the other existing ones.

After the definition of the e-distinctivity parameter and all its characteristics, the next step is to define how to visualize the results of an e-business idea. To implement the representation of the results we made use of a radar chart and every e-business idea has been considered separately. In this way, for each e-business idea, we will obtain a value for each axis of the radar, and this means that we will have eight assessments. Figures 2-11 show the final radar for every e-business idea taken into consideration for our study.

Figure 2.
E-distinctivity radar for
MDHP

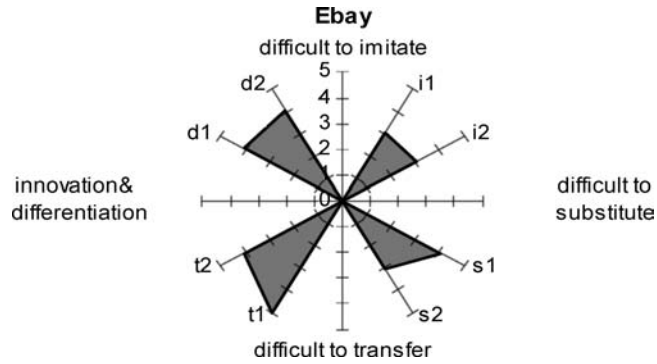
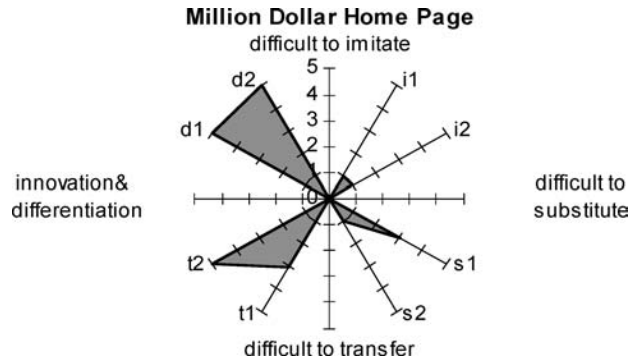


Figure 3.
E-distinctivity radar for
Ebay

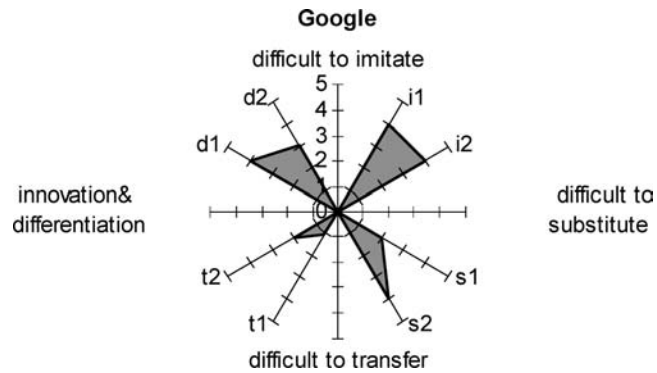


Figure 4.
E-distinctivity radar for
Google

As explained this method has been firstly applied to the enterprise reference group to see if the obtained results are sound with the reality of some well-known reference e-business ventures.

We have to underline the results of the test we made: every e-business idea from the enterprise reference group has obtained values quite high in two or more quadrants of

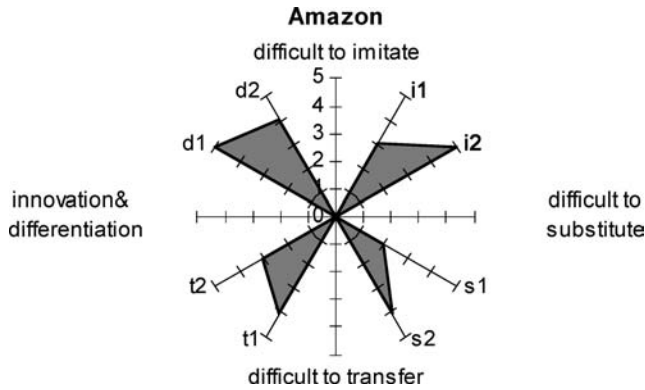


Figure 5. E-distinctivity radar for Amazon

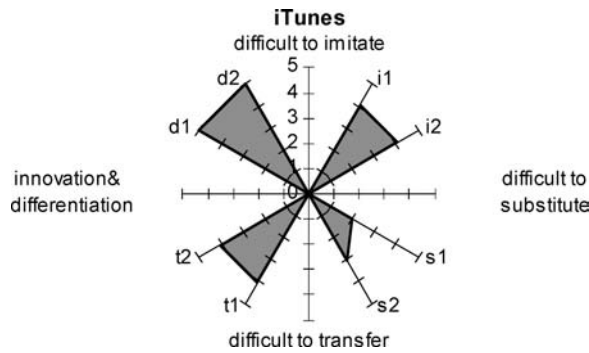


Figure 6. E-distinctivity radar for iTunes

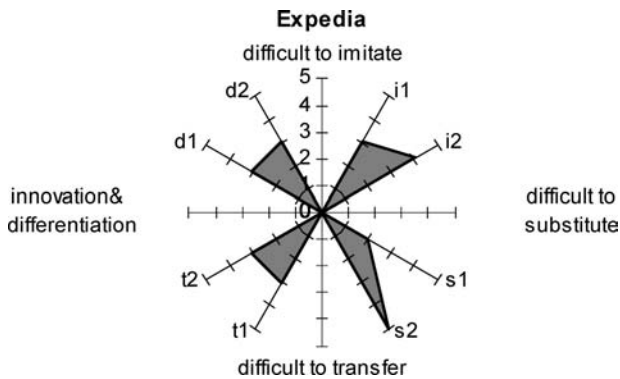


Figure 7. E-distinctivity radar for Expedia

the radar and this result is consistent with the fact that all the chosen enterprises are well known and have great success in their business.

We analyzed the results and we compared them in order to find significance for further applications. This method can be used in order to comprehend if a new e-business idea has the sufficient distinctivity to be a successful one. This means that a new e-business idea, on the one hand, can be compared with a group of different and

Figure 8.
E-distinctivity radar for
Yahoo

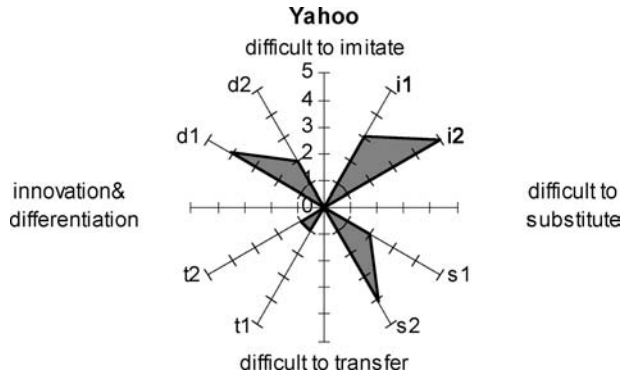


Figure 9.
E-distinctivity radar for
AOL

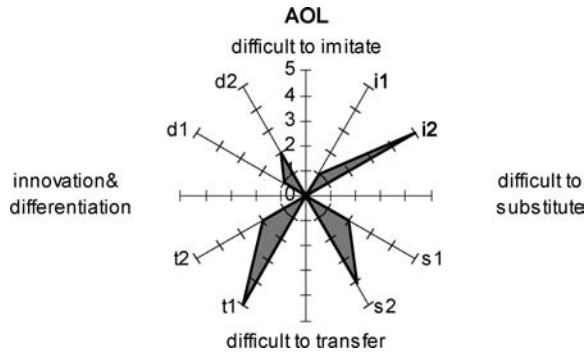
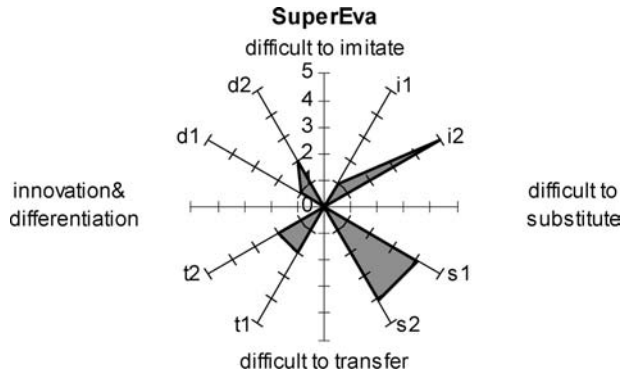


Figure 10.
E-distinctivity radar for
SuperEva



successful ideas to understand which is its strategic position in comparison with the others and, on the other hand, can be compared with different new e-business ideas in order to make easier for the enterprise the choice of the idea to put on the market.

In order to give an additional interpretation of the found results, we calculated the total sum of the values considering all the four quadrants of the radar, the mean value and the variance. These three numbers can give us additional insights to analyze the e-distinctivity of the e-business ideas. In Table I the results of the sum, mean and variance are shown.

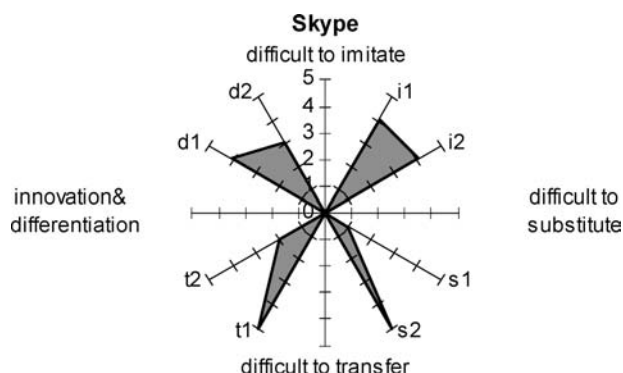


Figure 11.
E-distinctivity radar for Skype

The results of the sum underline the position of Google, Amazon and iTunes. They obtained the highest values, 30 and 31, while the lowest value belongs to SuperEva. All the chosen enterprises obtained a value that is higher than the mean value of the sum (20) and this lead us to a first consideration: in order to be successful, a new e-business idea should have a sum value of the e-distinctivity parameter higher than 20.

Through the observation of the mean values, we also observed that all the ten enterprises have a value that is higher than the median. This leads us to a second consideration: in order to be successful a new e-business idea should have the median value higher than 2.5.

The variance is the third value we considered for our study and gave us another important information: the variance in our study is a value between 0 and 5.333. Excluding the MDHP the range is reduced to 0 and 1.6. Considering the peculiarities of the business case for MDHP this leads us to a third consideration: in order to be successful a new e-business idea should have the variance value lower than 1.6. The results of our study are shown in Table II.

Enterprise	Sum	Mean	Variance
Google	24	3	1.17
Amazon	30	3.75	0.42
Ebay	30	3.75	0.42
iTunes	31	3.875	1.06
Expedia	26	3.25	0.08
Yahoo	22	2.75	1.58
AOL	22	2.75	0.75
SuperEva	21	2.625	1.23
Skype	28	3.5	0.17
MDHP	24	3	3.33

Table I.
The sum, mean and variance values for the ten enterprises considered

Results	Value
Sum	>20
Mean	>2.5
Variance	<1.6

Table II.
The table results of our study

Conclusions

In this paper, we proposed a new metric in order to support the feasibility evaluation of an e-business idea. The new approach is different from the existing ones because we identified an original parameter to be evaluated on a given e-business idea in order to provide a quantitative measure of its distinctness. To be applied the method requires only a detailed description of the idea; therefore, it is easy to compare many different alternative ideas during the feasibility phase and have quantitative data to evaluate them without requiring huge investments.

Another advantage of this method is that the idea can be easily compared with other e-business ideas through the comparison of the parameter value. A panel of ten successful e-business ideas has been evaluated using the parameters. This baseline evaluation can be used to assess how a new idea compares to them. Our results confirm the soundness of this evaluation parameter. The study provided three important properties that a new e-business idea must have in order to be successful in terms of distinctness: the first one is that the new e-business idea should have a sum value of the e-distinctivity parameter higher than 20; the second one is that a new e-business idea should have the mean value higher than 2.5; the third one is that a new e-business idea should have the variance value lower than 1.6. However, this parameter is not intended to be sufficient for an exhaustive assessment of the feasibility of an e-business idea. It is necessary to continue the investigation in order to determine other parameters and evaluation tasks in order to improve the accuracy of the model. Our aim is to support the selection phase of new e-business idea with the aid of new parameters that integrate the traditional methods of business analysis.

Further developments will be necessary for the definition of an extended set of parameters specifically designed for a complete assessment of an e-business ideas.

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